

WHAT IS CLAIMED IS:

1. A polarization splitter in which reflection of the S polarization is locally centered on at least one peak selected from the group consisting of (i) at least one emission peak of an image-emitting source of a micro-display, (ii) red, (iii) green and (iv) blue.
2. The polarization splitter according to claim 1 in which reflection is locally centered on at least two peaks.
3. The polarization splitter according to claim 1, in which reflection is locally centered on at least one peak in the visible spectrum.
4. The polarization splitter according to claim 2, in which reflection is locally centered on at least two peaks in the visible spectrum.
5. The polarization splitter according to claim 1, in which reflection for the S polarization is centered on red, green and blue.
6. The polarization splitter according to claim 1, in which peaks of its spectral reflectance curve for the S polarization, locally centered around the peaks, have their maximum level comprised between 60 and 100%.
7. The polarization splitter according to claim 1, in which peaks of its spectral reflectance curve for the S polarization, locally centered around the peaks, have their maximum level comprised between 80 and 100%.
8. The polarization splitter according to claim 1, in which its spectral reflectance curve for the S polarization has a level comprised between 0 and 35%, in all zones not locally centered around the peaks.
9. The polarization splitter according to claim 1, in which its spectral reflectance curve for the S polarization has a level comprised between 0 and 20%, in all zones not locally centered around the peaks.

10. The polarization splitter according to claim 1, in which each peak of the spectral reflectance curve of the S polarization centered around one of the peaks has a mid-height width of between 5 and 100 nm.

5 11. The polarization splitter according to claim 1, in which each peak of the spectral reflectance curve of the S polarization centered around one of the peaks has a mid-height width of between 20 and 80 nm.

10 12. The polarization splitter according to claim 1, in which each peak of the curve resulting from the product of the spectral transmittance for the P polarization and the spectral reflectance for the S polarization, centered around one of the peaks, has a mid-height width of between 5 and 100 nm.

15 13. The polarization splitter according to claim 1, in which each peak of the curve resulting from the product of the spectral transmittance for the P polarization and the spectral reflectance for the S polarization, centered around one of the peaks, has a mid-height width of between 20 and 80 nm.

20 14. The polarization splitter according to claim 1, in which spectral transmittance for the P polarization is greater than 80% on the emission spectrum of the source.

15. The polarization splitter according to claim 14, in which the emission spectrum of the source is between 400 and 700 nm.

25 16. The polarization splitter according to claim 1, in which spectral transmittance for the P polarization is greater than 90%, on the emission spectrum of the source.

17. The polarization splitter according to claim 16, in which the emission spectrum of the source is between 400 and 700 nm.

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18. The polarization splitter according to claim 1, in which the integrated average transmittance between 400 and 700 nm is greater than 70%.

35 19. The polarization splitter according to claim 1, comprising a substrate with a stack of thin layers.

20. The polarization splitter according to claim 1, comprising a substrate with a holographic element.

5 21. The polarization splitter according to claim 19, in which one of the materials is silicon dioxide.

22. The polarization splitter according to claim 19, in which one of the materials is zirconium dioxide or praseodymium titanate.

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23. The polarization splitter according to claim 1, in the form of a cube made up of two prisms.

24. A method of manufacturing a polarization splitter in which reflection of the S polarization is locally centered on at least one peak selected from the group consisting of (i) at least one emission peak of an image-emitting source of a micro-display, (ii) red, (iii) green and (iv) blue, comprising the following steps:

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- (i) providing a substrate; and
- (ii) depositing thin layers.

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25. An ophthalmic lens with inserts for projecting an image towards the user, having a polarization splitter in which reflection of the S polarization is locally centered on at least one peak selected from the group consisting of (i) at least one emission peak of an image-emitting source of a micro-display, (ii) red, (iii) green and (iv) blue.

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26. The ophthalmic lens according to claim 25, in which the polarization splitter is provided in the form of a cube.

27. A device for projecting an image towards the user, comprising an ophthalmic lens with inserts for projecting an image towards the user, having a polarization splitter in which reflection of the S polarization is locally centered on at least one peak selected from the group consisting of (i) at least one emission peak of an image-emitting source of a micro-display, (ii) red, (iii) green and (iv) blue.

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28. The projection device according to claim 27, additionally comprising a liquid crystal micro-screen.

29. The projection device according to claim 28, in which the liquid crystal
5 micro-display emits a P polarized light in red, green and blue.